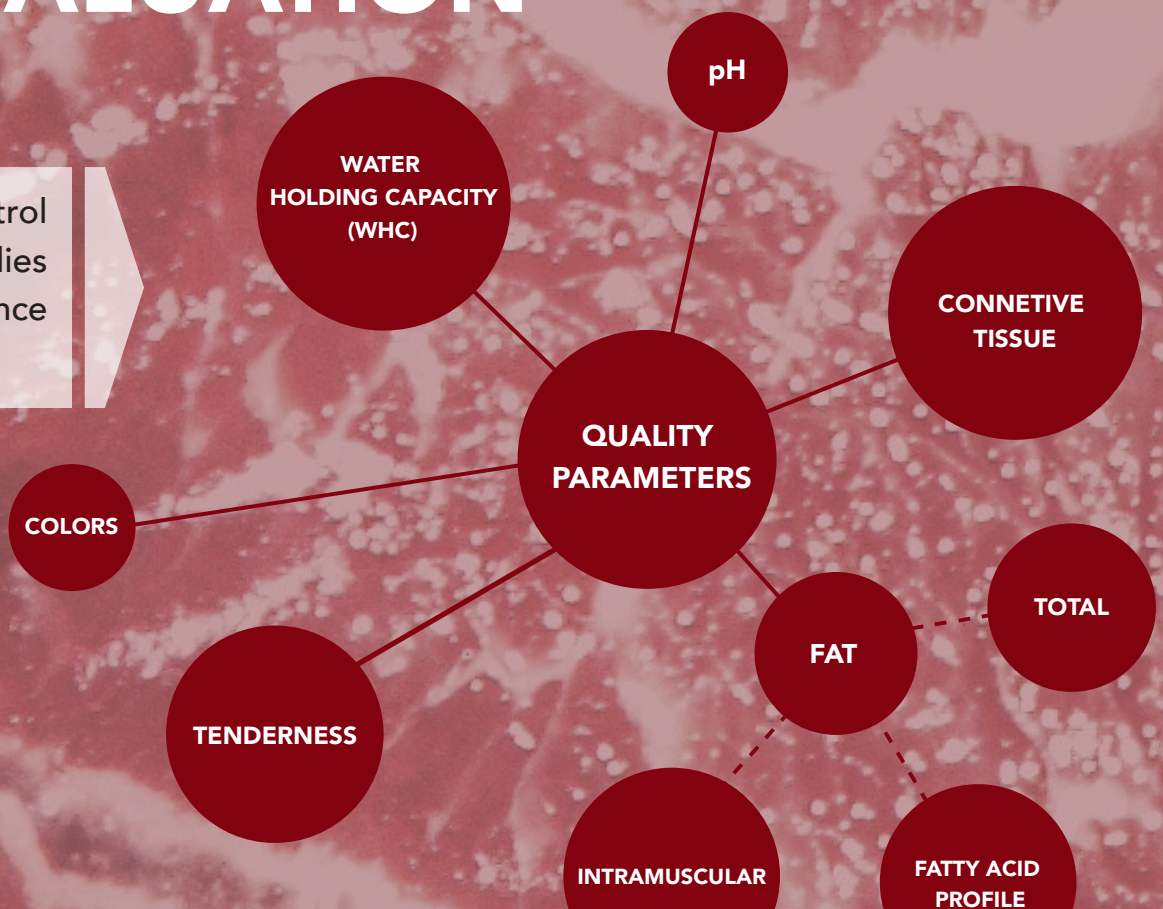
OPTICAL METHODS FOR MEAT QUALITY PARAMETERS EVALUATION

INTRODUCTION

Meat quality evaluation begins with the quality control of raw meat. The importance of its determination lies in the evaluation of a number of factors that influence its configuration and are part of its composition.



OBJECTIVE

This project aims to identify optic methods related to quality parameters providing an overview of the current research about quality analysis of fresh meat. Furthermore, the main advantages over traditional methods will be discussed.

	pH	WHC	COLOR	FAT			CONNETIVE TISSUE	TENDERNESS
				Total	Fatty acids profile	Intramuscular		
NIR	X	X	X	X	X	X		X
VIS-NIR	X			X	X	X		
Hyperspectral imaging system	X	X	X	X	X	X	X	X
Fluorometry							X	
X-Ray				X				
Magnetic Resonance Spectroscopy		X			X			
Raman Spectroscopy		X			X			X
COLORIMETRY (spectrophotometer)			X				X	
(colorimeter tristimulus)			X					

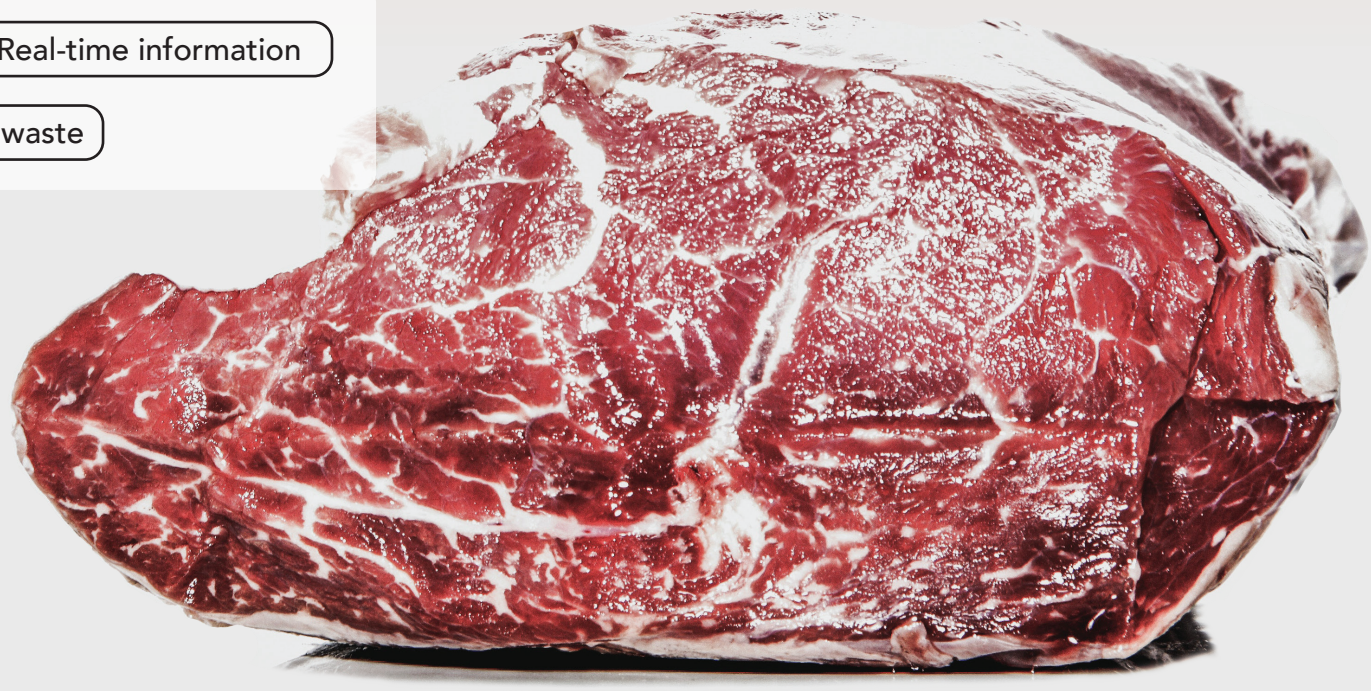
CONCLUSIONS

Outstanding optical methods identified: Visible and NIR spectroscopy, fluorometry, hyperspectral imaging system colorimetry, X-ray, Raman and magnetic resonance spectroscopy.

Advantages over traditional methods:

Fast | Objective | Nondestructive | Real-time information

↓ Costs by ↑ efficiency & ↓ Minimizing waste



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